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- VOLUME O -
IN THE UNITED STATES DISTRICT COURT
IN AND FOR THE DISTRICT OF DELAWARE

CORDIS CORPORATION, Plaintiff vs. MEDTRONIC AVE, INC., et al. — CIVIL ACTION NO. 97-550 (SLR)

BOSTON SCIENTIFIC CORPORATION, et al., Plaintiffs vs. ETHICON, INC., et al., Defendants — CIVIL ACTION NO. 98-19 (SLR)

CORDIS CORPORATION, Plaintiff vs. BOSTON SCIENTIFIC CORPORATION, et al., Defendants — CIVIL ACTION NO. 98-197 (SLR)

Wilmington, Delaware
Thursday, December 14, 2000
8:00 o'clock, a.m.

BEFORE: HONORABLE SUE L. ROBINSON, Chief Judge, and a jury

Official Court Reporters

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APPEARANCES:

ASHBY & GEDDES
BY: STEPHEN J. BALICK, ESQ.

-and-

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BY: GREGORY L. DISCANT, ESQ.
EUGENE M. GELERNTER, ESQ.
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ARTHUR GRAY, ESQ.
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PROCEEDINGS

(Proceedings commenced at 8:03 o'clock a.m., and the following occurred without the presence of the jury.)

THE COURT: I'm confident you all know the drill, so I guess we'll go page by page and try to work through the issues, if there are any. Hopefully, none too significant.

The first page? Page 1, 2, 3, 4, 5, 6. I'm so tired of this. We need to get a new example about circumstantial evidence. I am so tired of this example, but we're not going to be creative today.

Credibility of witnesses, number of witnesses, expert witnesses, deposition testimony. Did we hear deposition testimony?

MR. GRAY: Your Honor, we have none.

THE COURT: Good. Anything you can read.

MR. GRAY: Wait.

MR. COLBERT: We may, your Honor. We just may.

THE COURT: Okay. So I will just put a question mark on this one.

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Page 11, the parties and their contentions.

MR. GRAY: Your Honor, we have a problem with the second paragraph. Again, a re-examination certificate and a patent.

MR. GRAY: We'll recap the only claim involved and say that the trial is Claim 23 of the '762 patent.

THE COURT: Okay. So the suggested change is to cap – Claim 23 of the '762 patent, period.

MR. GRAY: Yes, your Honor.

THE COURT: All right. Is there any objection to that?

MR. CAVANAUGH: No, your Honor. We would propose adding to that – your Honor, if I could hand up – these are a few additional, very short charges we didn't talk about, and the first one would be added to the section.

THE COURT: All right.

MR. GRAY: Your Honor, we don't agree with this as a matter of law.

THE COURT: What are we all looking at? Amount and type of infringement are relevant?

MR. CAVANAUGH: Yes.

THE COURT: That wouldn't go under the caption, the parties, though, would it?

MR. CAVANAUGH: No, your Honor, it would not

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incremental sales. It only applies to sales that Cordis would not have made.
THE COURT: And which motion in limine was this?
MR. CAVANAUGH: Your Honor, I don't remember the number.
MR. COLBERT: I didn't bring it either, your Honor, because your Honor ruled on it and denied Mr. Cavanaugh's motion.
MR. CAVANAUGH: Your Honor, the point is the license is on all sales. It's a license for all sales.
Yes, for calculating damages, it's only applied to those sales for which we're not entitled to lost profits. But they've entirely shifted the hypothetical negotiation in their favor, and I would submit contrary to the law, by suggesting it's only on incremental sales.
MR. COLBERT: Your Honor, I think it's their Motion 21 and I believe your Honor's response was that we were not going to be precluded from introducing this testimony and that Mr. Cavanaugh would be fully free to interrogate Dr. Bell and to cross him to his heart's content.
THE COURT: Well, at this point, it seems to me as though the evidence is appropriate and relevant,

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and if there is a problem with the inferences that can be drawn from that, that can be addressed by counsel.
I know that -- well, so that's what we're going to do at this point.
MR. CAVANAUGH: That's fine. Your Honor, we'll renew our objection for the record.
THE COURT: All right. Thank you.
(Short recess taken.)

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(Court resumed after the recess.)
THE COURT: Let's bring the jury in.
(At this point the jury entered the courtroom and took their seats in the box.)
THE COURT: Mr. Colbert?
MR. COLBERT: Yes. Thank you, your Honor.
At the break, your Honor, I had asked to admit 4700. Is it admitted?
THE COURT: 4700 was --
MR. COLBERT: That was the document Dr. Bell talked about just at the break.
THE COURT: Yes, with Cordis' objection noted.
MR. CAVANAUGH: Thank you, your Honor.
*** (Defendant's Exhibit No. 4700 was received into evidence.)
MR. COLBERT: May I show it?
THE COURT: Yes.
MR. COLBERT: Yes, please. Put it up. Just show the top here.
BY MR. COLBERT:
Q. This is a Cordis franchise strategic plan 2000 to 2005, the document you were reading from?
A. It was.

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MR. COLBERT: Could you put up the last page, please? The third page of this document?
Go to the last page, signature page. I'm sorry.
Could you highlight this part right here (indicating)?
BY MR. COLBERT:
Q. That's Mr. Croce who testified in this case?
A. Correct.
Q. It's August 1, 1998. That's approximately the time negotiations would begin?
A. Correct.
Q. All right. Thank you.
MR. COLBERT: You may take it down. Thank you.
BY MR. COLBERT:
Q. Now, just briefly, we'll go through this. Each of these lines -- please describe each of these points just very briefly.
A. Sure. The broader product line issues is, again, related to availability and more diameters and more lengths. Remember that was one of the reasons why we had to take some sales out earlier.
The -- and as well BSC's broad line of cardiovascular products.
Advances in medical applications, there was

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the finesse trial that involved the NIR stents about navigating or stenting in more difficult lesions. BSC is assuming the risk of success and product liability. Obviously, if something were to happen to a patient as a result of a BSC stent, then it's BSC's responsibility, obviously not Cordis' responsibility.

And BSC had available to it, and on the market, of course, alternative noninfringing stent technology. It had the Radius and the Wall stent, and the Radius was another one of the stents that was in some sense favorably referred to in one of these opinion boards. Actually, the one that we had shown earlier.

Q. Okay. And just so we're clear, earlier you were talking about the range of catheter delivery and you read a document that was shown to you and talked about the best in class balloon.

A. Correct.

Q. Is that referring to the catheter delivery system?

A. Correct. Yes.

Q. Thank you.

Okay. Now, what is the outcome of the application of these factors, Dr. Bell, in your analysis?

A. Well, I think that, again, we're going to have a negotiation between that 9 percent, which was the 1986 royalty on EGP and Cordis for the Palmaz/Schatz patents

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and half of the anticipated NIR profit, which would have been the result of equal parties coming to the table with equal bargaining positions and each equally expected to assume responsibility for the future anticipated success of the product.

In fact, where I come out in terms of where in that range as a point estimate, if you will, of a royalty rate, I come out at 12.7 percent. And that's how I get from 9 to 16.3 down to a point of 12.7, is based on consideration of other Georgia-Pacific factors.

Q. All right. Now, did you do anything to compare that 12.7 to other rates in the industry?

A. I did.

Q. And what did you do?

A. Well, here's an example. Here's our 12.7. There's the 9 for Palmaz/Schatz. Obviously, 12.7 is greater than 9.

Another example that occurred around this time was with regard to the Fischell -- with regard to IsoStent, which was a company owned by the Fischells. This is not the -- well, it was owned by the Fischells. And in October of '98, J&J purchased IsoStent and part of the rationale for the purchase and the support for the purchase price was an expectation that J&J would be able to save royalties on intellectual property that the

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Fischells had that were related to stent technology. And they were expecting to save royalties of 7.5 percent per unit.

It's 8.5 on year because they would only save 7.5 percent. They would still have to pay 1 percent.

So together it was 8-1/2 percent, and that's obviously a basis under which Johnson & Johnson bought IsoStent and provided the principal financial rationale for the purchase.

Q. Did you find any licenses on stent delivery system devices?

A. Well, yes. Yes, I did. And, in fact, you know, we looked at other agreements that Cordis had relating to stent technology and relating to delivery system technology.

We didn't include, you know, agreements that were in settlement of litigation and we didn't include agreements that were part of a big purchase of another company. We didn't include agreements that were part of a broad supply arrangement. You know, we only wanted to look at arm's-length agreements that are like the agreements we had been negotiating here.

And look at the -- at the agreements that Cordis had and they're listed in my spread sheets. And the range on all of those agreements was from 1 percent

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up to as much as 9 percent.

And similarly with BSC, looked at their agreements in this area, and there the royalties ranged from 2-1/2 to 8 percent. And, again, that's all listed in the exhibits.

MR. COLBERT: Could you put the Elmo on, please? Thank you.

BY MR. COLBERT:

Q. Did you include in your spread sheet data that led to your summary, did you include the listing of the individual license in which you derived the list of the Cordis and Boston Scientific --

A. Yes.

Q. Is it CRA 2016?

A. I believe so, yes.

Q. I would like to show you CRA 2016.

MR. COLBERT: Your Honor, I understand Mr. Cavanaugh had a pending question about the spread sheets. I would like to show it.

Is there an objection?

MR. CAVANAUGH: Your Honor, I have no problem as a demonstrative.

MR. COLBERT: Okay.

BY MR. COLBERT:

Q. Is this the document that led to the chart showing

Exhibit GG

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IN THE UNITED STATES DISTRICT COURT
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CORDIS CORPORATION, Plaintiff vs. MEDTRONIC AVE, INC., et al. — CIVIL ACTION NO. 97-550 (SLR)

BOSTON SCIENTIFIC CORPORATION, et al., Plaintiffs vs. ETHICON, INC., et al., Defendants — CIVIL ACTION NO. 98-19 (SLR)

CORDIS CORPORATION, Plaintiff vs. BOSTON SCIENTIFIC CORPORATION, et al., Defendants — CIVIL ACTION NO. 98-197 (SLR)

Wilmington, Delaware
Tuesday, December 12, 2000
9:07 o'clock, a.m.

BEFORE: HONORABLE SUE L. ROBINSON, Chief Judge, and a jury

Official Court Reporters

APPEARANCES:

ASHBY & GEDDES
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-and-

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Counsel for Defendants

PROCEEDINGS

(Proceedings commenced at 9:07 o'clock a.m., and the following occurred without the presence of the jury.)

THE COURT: I trust there's nothing we have to address before the jury comes in, before the morning break?

MR. CAVANAUGH: That's correct, your Honor.

Your Honor, I should tell you when the damage experts testify, Mr. Hoffman for us, Dr. Bell, they're going to have a lot of demonstratives, but some of those demonstratives are also, we believe, summary exhibits under 1006, and we'll move some of those by agreement into evidence.

THE COURT: All right. Good.

Generally, if you agree, I will not disagree. Generally.

MR. CAVANAUGH: All right. There's always exceptions to the rule.

THE COURT: There are always exceptions.

(At this point the jury entered the courtroom and took their seats in the box.)

THE COURT: Good morning, ladies and gentlemen.

Mr. Cavanaugh?

MR. CAVANAUGH: Thank you, your Honor.

Good morning, ladies and gentlemen. Our first witness this morning will be Bob Croce from Johnson & Johnson. You may remember Mr. Croce testified in the liability phase. We're going to cover a few new subjects today. And he won't be on the stand too long. And so let's get started.

Bob?

- - -

PLAINTIFF'S TESTIMONY
CONTINUED

... ROBERT W. CROCE, having been previously duly sworn as a witness, was recalled and testified further as follows ...

DIRECT EXAMINATION

BY MR. CAVANAUGH:

Q. Good morning, Mr. Croce.

A. Good morning.

Q. Could you just remind the jury what your position is at Johnson & Johnson?

A. I'm Company Group Chairman and I have responsibility for Cordis worldwide.

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And so what I had to do next was to compute how much it would have cost to make those additional stents. And there I had to go to the books of accounting at Cordis, and by going through their books I was able to determine it would be a little more than $110 million to make the additional sales, to make the products and to sell them.
Q. What is the next step?
A. The next step is to subtract one from the other. That was easy. That got me 357, $358 million in lost profits, and that's what I believe are the lost profits on those stent sales that Cordis would have made.
Q. And is that the total amount of the lost profit component of your damage calculation?
A. That's the total amount of the first component, the lost profit component of the damage calculation, yes.
Q. Now, are those profits calculated before or after taxes?
A. That's all done on a pre-tax basis. If Cordis had actually made those sales, we'd now have to pay taxes on those -- on its income. When Cordis receives a check at the end of this trial, it's going to have to pay taxes on that, so everything that -- everything we do here is pre-tax and we don't get into the intricacies of Johnson & Johnson's tax return.

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Q. What is the next -- what is the other component of your damage calculation?
A. Well, here we've talked about 64 percent of the -- of the stents, the infringing stents and, as we know, for the other 36 percent, Cordis is entitled to at least a reasonable royalty. They wouldn't have made these sales, but they were, in fact, manufactured and sold by Boston Scientific. They were infringing sales and Boston Scientific owes Cordis a reasonable royalty for having done that.
Q. What do you mean by a royalty?
A. Royalty is an amount that you pay for using somebody else's intellectual property. I think of it like rent. The other person continues to own the property, but you use it for a while, and you basically pay rent for using it. Sometimes it's a percentage of the sales. Sometimes it's a big up-front check. Sometimes it's a check at the end. It's something that you pay for using somebody else's intellectual property.
Q. How did you go about determining the royalty rate in this case?
A. Well, I did what's pretty much standard in these circumstances. I sat back and thought about a whole bunch of things as to what would have happened if these two parties had actually sat down in July or August of

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1998 and talked to one another about what a reasonable royalty would be.
And I had help in doing that. There's a long list of factors, some 14 or 15 factors, to begin considering that -- the so-called Georgia-Pacific factors that I think were mentioned yesterday.
So I used those and I thought about what a reasonable royalty ought to be between the two parties.
Q. What conclusion did you arrive at?
A. I concluded that 40 percent -- a 40-percent royalty based on Boston Scientific's sales would, in fact, be a reasonable royalty for the intellectual property that is at issue here.
Q. How does that translate into damages?
A. Well, what one does is one multiplies, then, the actual or the sales that Boston Scientific made at their selling price. Take 36 percent of their stent sales over the various quarters and multiply by their actual selling price, and then multiply that number by 40 percent, and that works out to be about $115 million for this final component.
Q. Okay.
(Pause.)
BY MR. CAVANAUGH:
Q. Now, the reasonable royalty damages are calculated

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on this, the 36 percent?
A. That's correct. And lost profits on the 64 percent.
Q. All right. And you -- what you are essentially doing is taking the NIR selling price on those 195,000, taking 40 percent of that and we get the number of 115 million?
A. You get the number of 115 million. In fact, I do it on a detailed basis by quarter and basically create this pie chart, if you will, and spread sheet form for every quarter and do it based on their actual selling prices that quarter and so forth. When all is said and done, you're absolutely right. What we've got is those stents multiplied by Boston's selling price multiply by 40 percent.
Q. What is the final step in the process?
A. The final step in the process is to add the two together, and when you add the 357 and 115, you get $473 million. And that was an easy step.
(Mr. Cavanaugh handed an exhibit to the witness.)
BY MR. CAVANAUGH:
Q. Mr. Hoffman, I've shown you PX-3899. What is that?
A. That's, I believe, an exact copy of currently what's on the screen.
MR. CAVANAUGH: Your Honor, we'd move PX-3899

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with the corrugations being the serpentine pattern we talked about before with the Palmaz ring.
Q. Does the corrugated ring of the Tristar stent work the same way as the Palmaz ring in the '762 patent?
A. Exactly the same way, yes.
Q. Underneath corrugated ring it says multiple rings connected with multiple links. Using the Tristar, would you explain what that is?
A. Sure. As I was describing before, with a Palmaz ring, the way you can make a stent longer or shorter is by using more of the Palmaz rings. So here, we just see, you know, one, two, three, four, five, and you can have as many or as few as you wanted.
So that's what's meant by multiple rings in the stent here. And they're connected with multiple links.
In this case, you can see a link here, which connects this ring to that ring and you can't see it, but on the back side, there's another ring -- another connector. So there's more than one connector that connects each ring to its neighboring ring.
Q. And is there any difference between the geometry you see in the Tristar with the connections and the NIR stent connections that we learned about in the liability phase of this case?
A. Yes. Absolutely. And the differences stem from --

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probably the easiest way to look at the differences is the fact that, if you remember when we were describing the NIR, we were talking about them as being out of phase, and that meant when you had the serpentines, that the peaks of the serpentines were aligned, where here, if you look at this pattern, you will notice that this part of the -- this slot (indicating) within the ring is in the same position as the one right next to it. So this is in phase.
So as a result, the end of one of the -- the ring portions is lined up with the -- the peak. One side, it's lined up with a valley of the other.
So if you look at how you connect one to the other, the distance is much, much longer, so the connector is much longer than the connector in the NIR stent. And it connects the peak of one serpentine ring to the valley, if you will, of the other serpentine ring.
Q. Does the connector have a link in the Tristar have any effect on how the corrugated ring expands?
A. No, not at all. The way this expands is driven by the Palmaz ring, or the corrugated ring. That's what controls the expansion, as we talked about before. And the connector basically goes along for the ride.
Q. Can we focus in on the lower right-hand corner portion of the orange one, please? Great.

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Hear it says, it provides high radial strength without compromising flexibility or uniform scaffolding.
Could you explain what in the Tristar provides high radial strength?
A. It's identical to the fundamental Palmaz and NIR, that the radial strength comes from the -- what they are calling the corrugated ring or the Palmaz ring.
MR. TIMMONS: If we could just focus in on the stent... Big screen. Thank you.
BY MR. TIMMONS:
Q. How is the -- how are all three ACS stents manufactured?
A. They're manufactured by starting with a stainless steel tube, and removing material from that. In this case, the material is removed by a laser process.
Q. How are the -- how is the embodiment in the '762 patent made?
A. The preferred embodiment of the '762 is identical. You start with a stainless steel tube and you remove material from that stainless steel tube.
Q. The commercial embodiments of the Palmaz/Schatz and Palmaz stents, how are they made?
A. Again, identical. Starting with a stainless steel tube and removing material from the stainless steel tube to create the pattern that you see.

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Q. Are there any differences between the way that the Tristar is made and the way that the NIR stent is manufactured?
A. Yes. The NIR is manufactured starting with a flat sheet. You cut that pattern in the flat sheet and roll it up. In order to get the mechanical properties that you need, they're welded together. And as a result, you don't have -- in this product you don't have any weld points to worry about. And also we had talked about some of the U connectors that would spring back a little bit after being formed, and they potentially would protrude off of the surface a little bit.
We don't have any similar kind of U connectors or any protruding surfaces on the ACS design.
Q. So the lack of U's protruding and the lack of welds on the Tristar stent and the other ACS stents, does that have any effect at all on your infringement analysis of Claim 23?
A. Particularly as compared to the NIR analysis, it makes it a much more straightforward analysis to do, because you don't have to worry about, you know, whether or not the weld is important, whether or not the U is projecting off a little bit more. Everything made here is from the stainless steel tube and all on one cylindrical claim.

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Q. Let's turn to Claim 23. I will ask for PX-3, which is in evidence.

During the liability phase, we looked at the NIR stent in two different ways. First, as each segment being the tubular member and then the stent as a whole being a tubular member.

Can we do that for the ACS stents also?

A. Absolutely. Analysis can be done identically.

Q. Do you have an opinion as to whether or not the ACS Multi-Link Duet stents and Tristar stents infringe Claim 23 of the '762 patent?

A. I have an opinion. And that's that they do, indeed, infringe.

Q. That's true whether you look at the Tristar or any of the ACS stents as a whole or each as a corrugated individual ring?

A. That's right. Either way of looking at it, my conclusion is the same.

Q. Let's turn to each of the individual claim elements. And the first one is expandable intraluminal vascular graft, comprising. Are the ACS stents an expandable intraluminal vascular graft?

A. Absolutely. They're marketed and sold that way as stents.

Q. That's another way of saying stent?

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A. Absolutely. (Absolutely above)

Q. Next element. A thin-walled tubular member having first and second ends. And let's focus in on thin-walled first.

Do the ACS stents satisfy the thin-walled requirement?

A. Certainly. When you look at the thin-walled requirement, the wall has little extent from one side to another. The purpose of that is to allow it to be balloon expandable, what we've talked about before. In this case, the stent is certainly balloon expandable and the material thickness is on the order of 5-1/2 thousandths of an inch, which is obviously quite small.

Q. Dr. Collins, we've placed on the left-hand side the Court's definition. And do you understand that the -- that definition of thin-walled requires that it be thin-walled to both its first and second diameters?

A. Yes.

Q. The ACS stents, are they thin-walled, first and second diameters?

A. Yes. The wall, it's difficult to see it when you look at the stent as a whole, but when you expand it from the first diameter to the second diameter, the material does not change. The material's thickness stays the same.

Q. That's true for both the corrugated ring and the

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stent as a whole?

A. Absolutely, yes.

Q. The second part of this element is tubular member Do the ACS stents meet this claim definition?

A. Yes, they do. Again, you can look at it either as the stent as a whole or each one of the Palmaz rings or corrugated rings being a tubular member. That they're hollow, elongated, cylindrical structure with two ends And you look at it as the stent as a whole, there's absolutely no question but that it's elongated. It's much longer than it is in diameter. But when you look at each one of the ring elements, there are some designs, like the Multi-Link, in which the length of the ring element is a little bit shorter than its diameter, where for the Duet and Tristar, it is a little bit longer than its diameter.

Q. Let's recap for a second.

So when you look at the stent as a whole, it meets the tubular member element literally?

A. Exactly. Absolutely.

Q. And if these individual rings are elongated, also --

A. Correct.

Q. Let's talk about the situations where this ring is not elongated.

A. Okay.

Q. Do you have an opinion as to whether or not that

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non-elongated corrugated ring as an equivalent of an elongated tubular member?

A. Absolutely. The reason, from an engineering perspective in particular, what matters is that you have a slot and that slot is longer than it is wide and whether or not the whole ring happens to be a little bit more, a little bit less than a ratio of one, it does not matter at all.

Q. During the liability phase of this case, we talked about a very similar analysis of the NIR stent. We went through the function, way and result of an elongated tubular member under the '762 patent.

In your opinion, do the corrugated rings of the Multi-Link or the ACS stents, are they the equivalent of an elongated tubular member?

A. Yes, they are, in that they provide the same function, do it in the same way and give you the same result.

Q. Is -- what is -- do the individual rings of the ACS stents expand and support tissue whether or not they're elongated?

A. Absolutely.

Q. Is that the identical function to the Palmaz/Schatz? The Palmaz tubular member, if it's elongated?

A. That's correct.

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Q. Do the corrugated rings of the ACS stents perform this function in the same way as a tubular member of the '762 patent?
A. Yes, they do. And again the way this expands is the balloon will start to push the stent out. The bars or struts bend and they plastically deform as they expand in diameter, and the surgeon is allowed to control that expansion, and there's no springiness in that process because of the plastic deformation process.
Q. And the corrugated rings of the -- of the ACS stents that aren't elongated, do they achieve the same result as the elongated tubular member of the '762 patent?
A. Absolutely. They provide uniform support to the tissue wall and they do it in a way that allows a surgeon to control what the final diameter is. Once it's reached that final diameter, it stays where the surgeon wants it.
Q. So, in your opinion, does the -- do the ACS stents meet the thin-walled tubular member having first and second ends as claim element?
A. Absolutely, yes.
Q. Let's turn to the next claim element: A wall surface disposed between the first and second ends.
Do the ACS stents meet this definition?
A. Most definitely. Here, the definition is that the outer surface of the tubular member must be disposed in a

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common cylindrical plane. Well, you start with a cylinder and then material is removed from that cylinder. So you don't have to worry about bumps or anything else. This is a very straight cylinder from which material is removed and certainly meets that -- that definition exactly.
Q. The lack of U's and welds, does that have any effect in your analysis of this claim element?
A. Basically, I think it makes the analysis much more straightforward and much simpler thing to look at.
Q. So it's -- it's simpler than the NIR analysis?
A. Much more simpler than the NIR analysis, correct.
Q. The next claim element is a wall surface having a substantially uniform thickness.
Do the ACS stents meet this claim element, whether or not we look at them as corrugated rings or as a stent as a whole?
A. Absolutely. Again, you start with a stainless steel tube. These tubes are made of medical grade metal. In the manufacturing process, their wall thicknesses are very carefully controlled. And then material is removed from that, etching out the pattern, which leaves you with a uniform wall. You look at multiple rings, they're all made from the same tube, so they all have the same uniform wall thickness.
Q. What has to have a substantially uniform thickness,

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just to be clear?
A. If you will, the struts, the struts are what -- are the metal that make up the stent, and they have to be of uniform thickness.
Q. That's the metal that basically surrounds the slots?
A. That's correct.
Q. And directing you again to the Court's definition, it's requires that the wall surface be substantially uniform, both at its first and second diameters.
Is the material surrounding the slots the same thickness in both the first and second diameters, once the ACS stents are expanded?
- - -
A. Absolutely. As the stent expands, the wall thickness material does not change. You can see that, from the first diameter to the second diameter, it stays the same.
Q. Let's go on to the next claim element, which is a plurality of slots formed therein.
In your opinion, does the ACS stent meet the plurality of slots claim?
A. Absolutely. You can see there are a number of slots as you go around the circumference. The Palmaz ring, it's made up of slots, multiple slots.
- - -

Page 3219

A. (Continuing) And certainly as you start to couple multiple rings together, there are just more slots.
Q. And you talked earlier about how the stents are formed. Do these stents -- does the manufacturing process of the ACS process comply with the --
A. Absolutely. They do it in an identical way as the preferred embodiment.
MR. TIMMONS: The next element, please.
BY MR. TIMMONS:
Q. Are the slots disposed substantially parallel to the longitudinal axis of the tubular member?
A. They certainly are. The easiest way is probably looking at the blowup. You can see the orientation of a slot, which is along the axis of the stent.
Q. And does that geometry have any importance as to how the stent works?
A. It's absolutely critical to the functioning. It provides the space for the stents to open up and plastically deform.
Q. Is that anything like the coil stents we talked about during the liability phase?
A. No. It's 180 degrees literally from the coil stents where the openings are perpendicular to the axis. It's identical to the Palmaz ring design.

Page 3220

Q. Just a couple more elements. The next one is the tubular member have a first diameter. Do the ACS stents meet that first element?
A. They have a first diameter which allows it to be delivered to the site.
Q. A second diameter?
A. Yes. Second diameter is expanded and deformed diameter. When you apply a pressure from the balloon, it opens it up, plastically deforming the walls and generating a larger deformed diameter.
Q. And the very last element in Claim 23 requires that the outside of the wall surface of the tubular member be smooth in the first diameter.
Do the ACS stents meet this claim element?
A. Absolutely. You are starting with a smooth stainless steel tube and you are just removing material from it. So it is.
Q. Again, U's not protruding or no U's at all and the welds. Does that make any difference?
A. It makes the analysis that much more straightforward to do.
Q. It means to you that this is a smooth surface?
A. Smooth surface. No question.
Q. Just to sum up, what's your opinion as to whether or not the ACS stents meet Claim 23 of the '762 patent?

Page 3221

A. I think we've gone through each one. I've had no question but each of those stents meet all of the claim elements in Claim 23.
Q. Let's turn to something a little bit new, and I just want to talk to you a little bit about BSC's position on whether or not ACS meets these claim elements.
And do you understand that the -- that BSC and its experts assert that the -- each ring upon expansion is a little bit flaring at the end of those rings?
A. Yes, I do understand that.
Q. Does this position have any effect in your infringement analysis of Claim 23?
A. No. I've looked at it and I believe it has absolutely no impact at all in any of the claim elements. Therefore, it has no impact on my decision.
Q. Let's look at this flaring, and it's in PX-276 at Page 344 in the orange book. Focusing on the top.
Can you explain what we're seeing here?
A. Sure. This is a -- an ACS, a Multi-Link stent, which is expanded to its second or expanded diameter. And the flaring that you're talking about is probably best seen by looking at the ends. And, again, it's always hard to look at a three-dimensional product like this in the two-dimensional image and really have a sense.
But if you look at, for example, that part of

Page 3222

the ring, you can see it appears to be canting out a little bit. You can see an element out here that's can't go out a little bit, and that's the flaring you're referring to.
Q. Is that the Multi-Link stent?
A. Yes.
MR. TIMMONS: Can we do a split-screen? What we're going to do is put up one of the pictures that Dr. Snyder has attached to his expert report.
(Pause while counsel conferred.)
MR. TIMMONS: Is it all right, your Honor? There's no objection.
Flip it around, so we can be in the same orientation.
BY MR. TIMMONS:
Q. Tell me what's shown in this picture from Dr. Snyder.
A. This is a stent that I understand was implanted in a pig artery, a non-diseased pig artery, and then excised and cleaned up in and a picture was taken of it.
Q. Is this also a Multi-Link stent?
A. Yes.
Q. Do you understand that the ACS stents may flare upon expansion?
A. Sure. Yes.
Q. What, if anything, are factors that may control

Page 3223

the amount that it flares upon expansion?
A. There are a number of design parameters and expansion rates, but equally important is the -- are the conditions under which it's expanded. You can imagine if it's expanded in air, and I don't know for a fact, but I believe the one on the left was expanded in air. There's no force on the outside which is going to tend to push these struts back onto the surface.
If you go to the extreme and expand it in a very rigid vessel, you're going to be squeezing the stent up against the wall and it's going to conform to the balloon much more carefully.
Or an intermediate position, where you've got some resistance, where you will have from a healthy pig tissue that's going to tend to keep the flaring to a minimum.
Q. To the extent -- can you explain the differences between expanding the stent in a healthy artery and a diseased artery?
A. As an engineer, the differences I will be looking at are what are the external forces in the geometry that you are expanding into. So if you are expanding into a perfectly uniform geometry, a constant -- constant material characteristics, you'll get one result. If you are expanding into something which is highly not uniform

Exhibit

HH

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

CORDIS CORPORATION, Plaintiff, v. BOSTON SCIENTIFIC CORPORATION and SCIMED LIFE SYSTEMS, INC., Defendants.	Civil Action No. 97-550-SLR (consolidated)
BOSTON SCIENTIFIC CORPORATION and SCIMED LIFE SYSTEMS, INC., Plaintiffs, v. ETHICON, INC., CORDIS CORPORATION and JOHNSON & JOHNSON INTERVENTIONAL SYSTEMS CO., Defendants.	Civil Action No. 98-19-SLR
CORDIS CORPORATION, Plaintiff, v. BOSTON SCIENTIFIC CORPORATION and SCIMED LIFE SYSTEMS, INC., Defendants.	Civil Action No. 98-197-SLR

JURY VERDICT

We, the jury, unanimously find as follows:

I. LOST PROFITS DAMAGES

What amount of lost profits damages, if any, do you find that Cordis is entitled to for sales Cordis would have made but for Boston Scientific's infringement of claim 23 of the '762 patent?

$ 253,595,750

II. REASONABLE ROYALTY

A. What royalty rate did you find that Cordis was entitled to in determining the reasonable royalty for Boston Scientific's infringement of claim 23 of the '762 patent?

20 %

B. What amount of damages do you find that Cordis is entitled to as a reasonable royalty for sales of the NIR stent that Cordis would not have otherwise made?

$ 70,807,500

Each juror should sign the verdict form to reflect that a unanimous verdict has been reached.

Dated: December 15, 2000

Linda F. Barron
FOREPERSON

Danielle M. Stella

D. Brent Ashley

Gregory L. Lee

Olga D. Maloney

Carol A. Kendall

Sharon Garrison

Kris Brooks

Donald D. Mitchell

Exhibit
II

- VOLUME N -
IN THE UNITED STATES DISTRICT COURT
IN AND FOR THE DISTRICT OF DELAWARE

CORDIS CORPORATION, Plaintiff vs. MEDTRONIC AVE, INC., et al. — CIVIL ACTION NO. 97-550 (SLR)

BOSTON SCIENTIFIC CORPORATION, et al., Plaintiffs vs. ETHICON, INC., et al., Defendants — CIVIL ACTION NO. 98-19 (SLR)

CORDIS CORPORATION, Plaintiff vs. BOSTON SCIENTIFIC CORPORATION, et al., Defendants — CIVIL ACTION NO. 98-197 (SLR)

Wilmington, Delaware
Wednesday, December 13, 2000
9:40 o'clock, a.m.

BEFORE: HONORABLE SUE L. ROBINSON, Chief Judge, and a jury

Official Court Reporters

APPEARANCES:

ASHBY & GEDDES
BY: STEPHEN J. BALICK, ESQ

-and-

PATTERSON, BELNAP, WEBB & TYLER, LLP
BY: GREGORY L. DISKANT, ESQ.,
EUGENE M. GELERNTER, ESQ.,
WILLIAM F. CAVANAUGH, ESQ. and
MICHAEL J. TIMMONS, ESQ.
(New York, New York)

-and-

JOHNSON & JOHNSON
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YOUNG, CONAWAY, STARGATT & TAYLOR
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-and-

KENYON & KENYON
BY: GEORGE E. BADENOCH, ESQ.,
PAUL A. BONDOR, ESQ.,
ALBERT J. BRENEISEN, ESQ.,
MICHAEL ZACHARY, ESQ. and
ARTHUR GRAY, ESQ.
(Washington, D.C.)

Counsel for Defendants

- - - - -

PROCEEDINGS

(Proceedings commenced at 9:40 o'clock a.m., and the following occurred without the presence of the jury.)

THE COURT: I understand we have an issue. I have had an emergency to take care of. So if it has to be addressed before the morning break, we will. Otherwise, I have held the jury up and would like to get proceeding.

Mr. Cavanaugh?

MR. CAVANAUGH: I don't know what it is, your Honor.

THE COURT: Mr. Walker.

MR. WALKER: We wanted to confirm how you would like us to handle -- we anticipate we will want to make a few motions after they rest their case and we would like to know how you would like to handle that in front of the jury.

THE COURT: You do not handle it in front of the jury. We have motions and I will take them sometime when the jury is not here.

Let's bring the jury in. And I apologize for holding you all up.

(At this point the jury entered the courtroom and took their seats in the box.)

THE COURT: Members of the jury, I had to deal with some issues. I am the one who held you up. I apologize.

We will continue at this point.

Mr. Cavanaugh.

MR. CAVANAUGH: Thank you, your Honor. Good morning, ladies and gentlemen.

Our next and last witness will be Mr. Jesse Penn, who is the President of Cordis Cardiology. He is going to talk to you about manufacturing and capacity issues.

- - -

PLAINTIFF'S TESTIMONY
CONTINUED

... JESSE R. PENN, having been duly sworn as a witness, was examined and testified as follows ...

DIRECT EXAMINATION

BY MR. CAVANAUGH:

Q. Mr. Penn, what is your current position?

A. I am the President of Cordis Cardiology USA.

Q. When did you begin working for Johnson & Johnson?

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in yellow. So here I will follow a corrugated ring. You see again the purple dots indicating the points where measurements were made. And in this case, there were 320 measurement points.
Q. Who did the laser measurements?
A. The technicians at Scimed.
Q. How many ACS Multi-Links were measured?
A. One.
Q. Was the stent that was examined and measured, was that expanded or unexpanded?
A. This was an expanded stent.
Q. Now, who did the measurement comparisons in order to determine the heights of the projecting edges?
A. I did that.
Q. Could you explain how you did that?
A. Yes. I followed the same methodology, the same idea that I did with the NIR. The question was: Do these tips right here, does a tip like this one, or this one, or this one, and so on, does it truly tip out and how much does it tip out.
To do that, again I used the closest point and found a tip such as this one would protrude significantly from what I called the Y intersections here. So I compared the U tips to the Y intersections and found the degree to which they tip out.

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Q. And when you compared those two points, what did you find?
A. I found that typically a point like this would protrude 3.6 thousandths of an inch from its nearest neighbor, such as this one. I also looked at how far they tip out, this point tips out from this point and found that they tip out about three-thousandths of an inch. That is interesting, because here we are about two-thirds of the way back from the tip, back here, and most of the deflection is gone. These points are almost down at the base, as it were. So it illustrates how these really do curve up at the end as is illustrated in the patent and apparent in the photographs.
Q. Let me just make sure I understand. Does that mean that the points that are away from the tip are already bending up and out of the plane?
A. But only just a little, so there is more flexion up here at the end than there is down here.
Q. Now, you mentioned that on the average you found the protrusions of the use to extend 3.6 thousandths of an inch?
A. That's right.
Q. Can you just point out where that is on the stent, please?
A. Again, probably the easiest place to look is right here. I have my red dot as best as I can hold it on the tip of a U and its nearest neighbor is this point right here. And this point sits 3 6 thousandths of an inch above this point.
Q. And does that occur in each of these corrugated rings all along the stent?
A. Yes.
Q. So your numbers are average numbers?
A. Yes. The number I gave is an average.
Q. Now, based on the measurements that you observed, I would like to go through the claim, please. Now, focusing for the moment, I would like to first focus on the term thin-walled as has been interpreted by the Court. The Court's interpretation of thin-walled is that the wall of the tubular member must have extent from one surface to its opposite at both its first and second diameters.
In the first diameter, do you find that the ACS Multi-Link stent conforms to the Court's definition?
A. As far as I know, in the first diameter, it does.
Q. What about in the expanded or second diameter?
A. In the second diameter, it does not. Again, because of these outwardly projecting edges, which Cordis argued in its prosecution or its endeavor to have the '762 patent granted, Cordis argued that outwardly projecting edges can cause selective thickening, I think were their words, of

Page 3324

Page 3325

the stent.
Q. And do you find selective thickening of the stent in the ACS Multi-Link when it is expanded?
A. Yes.
Q. Let's go to the next chart, which has wall surface.
Do you find that the – the Court has defined wall surface as the outer surface of the tubular member must be disposed in a common cylindrical plane.
You previously described what you understood common cylindrical plane to mean?
A. Yes.
Q. Is the Multi-Link in the expanded state disposed in a common cylindrical plane, in your opinion?
A. No. Clearly, you can't find a cylindrical plane in which all these points even approximately lie.
Q. Can you just illustrate that a little?
A. Again, because of these outwardly projecting edges, you can't find a cylindrical plane that includes these points up on this tip and also includes these points down here at the base.
Q. And does that mean you can't find a common cylindrical plane either along the entire tube or in the separate corrugated rings?
A. Either way, you can't find one.
MR. BRENEISEN: Let's go to the substantially

Page 3326

uniform thickness.
BY MR. BRENEISEN:
Q. The Court has defined substantially uniform thickness as the thickness at all points along the wall surface of the tubular member, both at its first and second diameters, must be substantially the same. Variances as little as one thousandth of an inch fall outside the scope of substantially uniform.
In the ACS Multi-Link stent, do you find that the stent is substantially uniform in thickness?
A. No, I don't.
Q. And your measurements showed that it was 3.6 thousandths?
A. These tip out 3.6 thousandths of an inch. If you try to account for a little variability even back at the base you still get at least 3.7 thousandths variation in thickness.
- - -

Page 3327

Q. So that that would be in the terms that are in the dimensions set forth in the Court's definition, what you found they extended 0.0036; is that correct?
A. Yes. That's right.
Q. More than three times the variance that is defined in the Court's definition?
A. That's right.
Q. I'm going to hand you, Dr. Snyder, two photographs, one is Defendant's Exhibit 5829-A and the other is Defendant's Exhibit 5229-B, and I'll ask you if you could tell us what these are?
A. These are two different photographs taken in an electron microscope of a Multi-Link stent that was expanded in the right coronary artery of a pig.
MR. BRENEISEN: I would offer Defendant's Exhibits 5829-A and 5229-B.
MR. DISKANT: I have no objection.
THE COURT: Thank you.
*** (Defendant's Exhibits No. 5829-A and 5229-B were received into evidence.)
MR. BRENEISEN: Can we have up 5229-B?
BY MR. BRENEISEN:
Q. What are we looking at now, Dr. Snyder?
A. Again, we're looking at the twofold corrugated

Page 3328

rings, and half ring at the top and bottom, so it's a closeup of part of the stent after it has been taken out of the pig and the tissue has been removed. And we see that in a coronary artery, we see both the tilt and the tipping at the end of these U-shaped members, so we see the outwardly projecting members that the designer is looking for in the design of this stent.
MR. BRENEISEN: Could we have the other photograph? 5829-A?
BY MR. BRENEISEN:
Q. Not quite the same quality as the other one, but does that show the outwardly projecting edges?
A. Yes. We don't have a side view of any of them here, but I think you can see the perspective on this one and on this one.
Q. And these are both photographs of the stents that were removed from the pig?
A. From the pig, right.
Q. Now, were you here when Dr. -- Well, having looked at these photographs, how does that affect your opinion?
A. It confirms that this tipping effect occurs, this projecting edge effect occurs in a real coronary artery as well as in NIR.
Q. Now, Dr. Collins, he mentioned that these were not of stents that were implanted in a stenosed pig. Do you

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remember that?
A. Yes.
Q. Meaning that it was not a heavily stenosed artery that it was put into?
A. That's right.
Q. In an animal with pre-existing stenosis in the vessel, when a stent is implanted, is the artery dilated before the implantation?
A. Yes. If you have a patient with a substantial narrowing of an artery, these narrowings are very, very substantial. The opening is very small in order to justify going through the procedure. So the instructions for use of the stents tell you to take a conventional angioplasty balloon, the old-fashioned pre-stent method of thread that through the narrowing pre-expand the vessel to break that material and open it up and now you have the result that you would have gone home with in the old-fashioned balloon angioplasty, and then that is followed by going in with the stent placement balloon with the stent on it and deploying the stent in order to hold the vessel up.
Q. And what happens to the stenosis when you go through the angioplasty process?
A. You tend to break and compress this material that has been blocking the artery and you open it back up.

Exhibit

JJ

- VOLUME P -
IN THE UNITED STATES DISTRICT COURT
IN AND FOR THE DISTRICT OF DELAWARE

CORDIS CORPORATION, Plaintiff vs. MEDTRONIC AVE, INC., et al. — CIVIL ACTION NO. 97-550 (SLR)

BOSTON SCIENTIFIC CORPORATION, et al., Plaintiffs vs. ETHICON, INC., et al., Defendants — CIVIL ACTION NO. 98-19 (SLR)

CORDIS CORPORATION, Plaintiff vs. BOSTON SCIENTIFIC CORPORATION, et al., Defendants — CIVIL ACTION NO. 98-19? (SLR)

Wilmington, Delaware
Friday, December 15, 2000
7:35 o'clock a.m.

BEFORE: HONORABLE SUE L. ROBINSON, Chief Judge, and a jury

Official Court Reporters

APPEARANCES:

ASHBY & GEDDES
BY STEPHEN J. BALICK, ESQ.

-and-

PATTERSON, BELKNAP, WEBB & TYLER, LLP
BY: GREGORY L. DISKANT, ESQ.
EUGENE M. GELERNTER, ESQ.
WILLIAM F. CAVANAUGH, ESQ. and
MICHAEL J. TIMMONS, ESQ.
(New York, New York)

-and-

JOHNSON & JOHNSON
BY: ERIC I. HARRIS, ESQ.

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BY: JOSY W. INGERSOLL, ESQ.

-and-

KENYON & KENYON
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PAUL A. BONDOR, ESQ.
ALBERT J. BRENDESEN, ESQ.
MICHAEL ZACHARY, ESQ. and
ARTHUR GRAY, ESQ.
(Washington, D.C.)

Counsel for Defendants

PROCEEDINGS

(Proceedings commenced at 7:35 o'clock a.m., and the following occurred without the presence of the jury.)

THE COURT: Good morning.

Let's get down to business. I guess we will go through the jury instructions then the verdict, so that we all have time to gather ourselves before we actually present this to the jury. I guess we can go page by page, or if you want to tell me the first -- wait a minute.

On Page 3, I have not stricken things from the record at this point. So do I have everyone's permission to cross out the instruction. Yes.

That is Page 4, Page 5 --

MR. GRAY: Your Honor, I think we are up through Page 10, with the deposition.

THE COURT: Anything before Page 13 from Cordis?

MR. DISKANT: No, your Honor.

MR. GRAY: Your Honor, 14, at least one valid patent claim, we don't see a reason for the at least.

THE COURT. Because you found, okay

MR. GRAY In the third line, where it says entitled to the full amount of damages, we don't see the need for the word full

THE COURT. That is true They are entitled to a full amount of damages

MR. GRAY. Full implies more than --

THE COURT It implies a complete, not an overflowing amount of damages, or does not imply something more than they are entitled to

MR. GRAY Total amount

MR. DISKANT It is the right amount

MR. GRAY. It seems to have a connotation, your Honor Maybe it's just me

THE COURT We will leave it at full

MR. DISKANT Your Honor, when we take out the word at least, it gives a strange emphasis to the one It seems to me we should say because you found Claim 23 of the '762 patent to be valid and infringed, then keep going

MR. GRAY That would be fine, your Honor

THE COURT All right: 15

MR. GRAY In the second paragraph, your Honor, it says it is not relevant to the question of damages. I think more properly, it is not relevant to the question of lost profits to a reasonable royalty,

it is entitled to recover

The patent laws provide that in the case of infringement of a valid patent claim, the owner of the patent shall be awarded damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer. Damages are compensation for all losses suffered as a result of the infringement.

It is not relevant to the question of damages whether Boston Scientific benefitted from, realized profits from or even lost money as a result of the acts of infringement. The only issue is the amount necessary to adequately compensate Cordis for Boston Scientific's infringement. Adequate compensation should return Cordis to the position it would have occupied had there been no infringement.

I will now explain how you should determine an appropriate damages award.

Cordis has the burden of proving its damages by what is called a preponderance of the evidence. That means that Cordis has to produce evidence which, when considered in light of all of the facts, leads you to believe that what Cordis claims is more likely true than not.

To put it differently, if you were to put

Cordis and Boston Scientific's evidence on the opposite sides of a scale, the evidence supporting Cordis' claims would have to make the scales tip somewhat on its side if the scales are even, or tip toward Boston Scientific's side, then Cordis has not carried its burden of proof.

To get lost profits as damages, Cordis must demonstrate that there was a reasonable probability that, in the absence of infringement, it would have made Boston Scientific's sales. Cordis not need to negate all possibilities that a purchaser might have bought a different product or might have foregone the purchase altogether.

Once Cordis has established the reasonableness of the conclusion that the infringing sales caused Cordis' lost profits, the burden is placed on Boston Scientific to show that this conclusion is not reasonable.

In determining damages, you must first determine if Cordis has proven its entitlement to lost profits. Only if you find that Cordis is not entitled to lost profits on certain sales, you will then determine Cordis' damages based upon a reasonable royalty.

Cordis is seeking lost profits in the form of diverted sales. The patent owner must establish a causation between his lost profits and the infringement. A factual basis for the causation is that, but for the

infringement, the patent owner would have made the sales that the infringer made. In order to show that Cordis would have made the sales Boston Scientific made, Cordis must show that -- these typos continue to creep into my instructions -- must show that:

One, there was a demand for the patented product.

Two, Cordis had the ability to meet the market demand.

And, three, no acceptable noninfringing substitutes were available.

However, as to this last element, as I will explain in a moment, it is not necessary for Cordis to prove that Cordis and Boston Scientific were the only two suppliers of stents in order for Cordis to recover lost profits on some percentage of Boston Scientific's sales.

Cordis need not negate every possibility that purchasers of Boston Scientific's products might have bought another product. It is Cordis' burden to prove, you however, that there were no substitute products that were both noninfringing and acceptable.

To establish its entitlement to lost profits based on lost sales, one of the things that Cordis must prove is that there were no acceptable noninfringing substitutes to the patented products during the period of

infringement. There are two parts to determining whether a particular product qualified as a noninfringing substitute:

First, it must be determined whether that product infringes Claim 23 of the '762 patent. That determination is made by applying the instructions regarding infringement and the meaning of patent claims in dispute contained on Pages 21 through 40 of the set of jury charges applicable to the earlier phase of the trial.

Second, it must be determined whether the product would have been an acceptable substitute to the patented product. In order to be an acceptable substitute, the product in question must have the advantages of the patented invention that were important to customers. A product that does not have those advantages would not be an acceptable substitute to the customer who wanted those advantages.

If, however, the realities of the marketplace are that competitors other than Cordis would likely have captured the sales made by Boston Scientific, even despite a difference in the products, then Cordis is not entitled to lost profits on any sales that would have been captured by those competitors.

The parties agree that the Radius and Magic

Page 3889

all stent do not infringe Claim 23 of the '762 patent.
The parties also agree that the Cook GR 1 and GR 2 stents and the Medtronic Wiktor stents were licensed by Cordis and that they were lawfully on the market as of the date that they became licensed.

However, Cordis and Boston Scientific disagree as to whether those stents would have been acceptable substitutes for the patented products. Boston Scientific contends that they would have been acceptable substitutes, while Cordis contends that they would not have been. In reaching your conclusion on this issue, you must apply the standard for what constitutes an acceptable substitute that I just told you about.

Both Cordis and Boston Scientific agree that the stents made by ACS are substitutes for the patented products. The parties agree that the ACS stents are noninfringing substitutes to the patented products after April 3, 2000, because Cordis and ACS on that date entered into a settlement agreement, which included a grant of a license to ACS under the '762 patent.

Cordis and Boston Scientific differ as to whether the ACS stents should be considered as noninfringing substitutes prior to April 3, 2000. Cordis contends that the ACS stents are not noninfringing substitutes prior to that date because Cordis contends

Page 3890

that they infringed Claim 23 of the '762 patent prior to that date. Boston Scientific contends that the ACS stents are noninfringing substitutes because Boston Scientific contends that they have never infringed the '762 patent – and that should be infringed Claim 23 of the '762 patent.

Cordis has the burden of proving that the ACS stents should not count as noninfringing substitutes prior to April 3, 2000 by a preponderance of the evidence.

You must, therefore, determine whether ACS's stents infringe Claim 23 of the '762 patent. In making this determination, you should apply the instructions regarding infringement and the meaning of patent claims in dispute contained on Pages 21 through 40 of the set of jury instructions applicable to the earlier phase of the trial.

If you find that the ACS stents infringe Claim 23 of the '762 patent, then the ACS stents were not a noninfringing substitute until April 3, 2000. If you find that the ACS stents do not infringe Claim 23 of the '762 patent, then the ACS stents were noninfringing substitutes from the date ACS entered the United States market, October 3, 1997

Further, AVE markets the MicroStent, GFX 1, GFX 2, and S series stents It is agreed between the

Page 3891

parties that these stents infringe Claim 23 of the '762 patent, and, therefore, are not noninfringing substitutes

During the course of the trial, you may have heard about various settlement agreements between Cordis and other parties, which may have licensed one or more of the patents at issue in the liability phase of the trial

Settlement agreements are not evidence regarding the value of a patent, the validity of a patent, or infringement of a patent. Parties settle lawsuits for various business reasons that may have nothing to do with respective views of the worth of any patent claim. Therefore, you should not consider the fact that a party entered into a settlement agreement as evidence that it infringed a patent, or that it agreed that it infringed the patent, or even that it believed it infringed a patent.

You must decide the issue of infringement for yourselves.

As I said before, to establish its entitlement to lost profits based on lost sales, one of the things that Cordis must prove is that there was demand for the patented products attributable to the claimed features of that product. Demand for the patented products can be proven by significant sales of Cordis' products or by significant sales of Boston Scientific's products

As I indicated before, Cordis is only entitled

Page 3892

to lost profits for sales it would have made but for the infringement. Accordingly, to be entitled to its lost profits based on additional sales that it claims it would have made, Cordis must prove that it would have had the ability to manufacture or otherwise obtain its product to make those additional sales, as well as the marketing capability to make those additional sales

It is not necessary for Cordis to prove that Cordis and Boston Scientific were the only two suppliers in the market in order for Cordis to demonstrate entitlement to lost profits for some of Boston Scientific's sales. If the realities of the marketplace are such that noninfringing substitutes were available from suppliers who would have made only some, but not all, of the sales that were made by Boston Scientific, then Cordis may be entitled to lost profits on a percentage of the infringing sales.

The burden is on Cordis, however, to show to a reasonable probability that it would have sold that percentage if the NIR stents had never existed. By the same token, even if you find that Cordis and Boston Scientific would have been the only two suppliers of products having the advantages of the patented product, it does not necessarily mean that Cordis would have made all of Boston Scientific's sales The burden is on Cordis

Exhibit

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- VOLUME J -
IN THE UNITED STATES DISTRICT COURT
IN AND FOR THE DISTRICT OF DELAWARE

CORDIS CORPORATION, Plaintiff vs. MEDTRONIC AVE, INC., et al. — CIVIL ACTION NO. 97-550 (SLR)

BOSTON SCIENTIFIC CORPORATION, et al., Plaintiffs vs. STERICON, INC., et al., Defendants — CIVIL ACTION NO. 98-19 (SLR)

CORDIS CORPORATION, Plaintiff vs. BOSTON SCIENTIFIC CORPORATION, et al., Defendants — CIVIL ACTION NO. 98-197 (SLR)

Wilmington, Delaware
Thursday, December 7, 2000
7:35 o'clock, a.m.

BEFORE: HONORABLE SUE L. ROBINSON, Chief Judge, and a jury

Official Court Reporters

APPEARANCES:

ASHBY & GEDDES
BY: STEPHEN J. BALICK, ESQ.

-and-

PATTERSON, BELKNAP, WEBB & TYLER, LLP
BY: GREGORY L. DISKANT, ESQ.
EUGENE M. GELERNTER, ESQ.
WILLIAM P. CAVANAUGH, ESQ. and
MICHAEL J. TIMONEY, ESQ.
(New York, New York)

-and-

JOHNSON & JOHNSON
BY: ERIC J. HARRIS, ESQ.

Counsel for Plaintiffs

YOUNG, CONAWAY, STARGATT & TAYLOR
BY: JOSY W. INGERSOLL, ESQ.

-and-

KENYON & KENYON
BY: GEORGE E. BADENOCH, ESQ.
PAUL A. BONDOR, ESQ.
ALBERT J. BRENZINSKY, ESQ.
MICHAEL ZACHARY, ESQ. and
ARTHUR GRAY, ESQ.
(Washington, D.C.)

Counsel for Defendants

PROCEEDINGS

(Proceedings commenced at 7:35 o'clock a.m., and the following occurred without the presence of the jury.)

THE COURT: All right. A couple preliminary explanations, so then we can go through this for purposes of stating your objections for the record, correcting typos, making minor revisions.

First of all, with -- and I don't know where we stand with this, but in terms of whether there still is a question of prosecution history estoppel before the '762 patent, having reviewed the new Circuit case in Festo, and I have no idea, this is on Page 24 of 80 or whatever I have of Lexis. I think clearly that's a question for the Court.

And so, if it's an issue, it's not an issue for the jury.

MR. GRAY: Your Honor, I'm sorry, but may I just interrupt for a second?

THE COURT: Yes.

MR. GRAY: We agree. We have a JMOL on that issue I would like to hand up (handing documents to the

Court).

THE COURT: With respect to contributory infringement, we struggled -- we being me and my Law Clerks -- struggled with the question, and I didn't find the -- I didn't find the case law particularly persuasive but for one case, because this one case is the only one that actually addressed the issue. Everything else, it was just trying to look at the facts and divine what the situation was.

And this is the case from the Northern District of California, 1999. I have no idea how to pronounce this. Farugia (phonetic) Laboratories. That Court said there's got to be some connection. It's not a substantial relationship. It's not no connection. It's some connection.

Now, I, frankly, don't know whether that has been established. I think its posit has been established.

So if we need, we can try to fit in argument about that, but that's why I chose that language. It's based on that case.

MR. DISKANT: Your Honor, we disagree with it as a matter of law and, therefore, object to the charge, but on my rebuttal with Dr. Buller, I will make sure it gets connected up. So I don't think there will be a factual problem.

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into the U.S.

This overruled several of the cases Boston Scientific relied on.

MR. GRAY: Your Honor, it's not a 271(g) issue at all. We argued this before. 271(g) is a process carried out to sell a product of that process. This is not that case. This is a process claim having nothing to do with the production of a product. This is a method claim having to do with the method. And if the method is not carried out within the United States, then there can be no infringement of the method.

271(g) is totally irrelevant to this issue.

THE COURT: All right. Do you have -- I don't recall -- actually, I don't recall whether there was case law that you cited for this proposition or do you have any?

MR. HOWARD: Yes, your Honor. The Avery decision, which was attached to our most recent submission.

THE COURT: I know you have case law. I was asking Boston Scientific.

MR. ZACHARY: Yes, your Honor. There are cases. We cited them in the last -- in the jury instructions. I believe we may have a copy.

THE COURT: I think I've got it. I just have

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to find it.

MR. DISKANT: Your Honor, I'm concerned about potentially misleading argument on this issue, so I think another sentence might be useful.

There's no dispute that, at least for some of the NIR stents in this case, all the steps take place in the U.S., which is to say Boston Scientific receives them, utilizes them by disposing them on catheter. It sells them to doctors. Doctors complete all the final steps.

They attempted to offer some evidence through Mr. Nicholas that some of the NIR stents are mounted in Ireland. Through Dr. Buller this morning, will clarify that 75 percent of the stents sold in the U.S. have been mounted in the U.S.

This issue, if it's going to actually be a case, will be a damages issue, not an infringement issue. It would be inappropriate for Boston to suggest because some of the stents are mounted outside of the U.S., that somehow constitutes a defense. It doesn't if they contributorily infringe with a Singer NIR stent. That's good enough for the purposes of this part of the proceeding.

So I appreciate the charge that says you need not find that every NIR stent is --

THE COURT: How about, you need only find that

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one?

MR. DISKANT: One. That will be just fine. Because I think it's going to be confusing to the jury and really is at best -- if it's an issue, it's a damages issue, not a --

MR. GRAY: Your Honor, what is the suggested cure that Mr. Diskant -- proposes?

THE COURT: Well, I'm not sure. I think that's still in progress. I think the suggested cure is that -- to use -- I got on the other hands a lot from Boston.

On the other hand, if you find -- and that's where -- if you find that any of the stents of Claim 44 are carried -- if you find that --

MR. GRAY: If you want to put on the other hand, you will find that all steps --

THE COURT: Well, tell me something. Is there any doubt that there's at least one NIR stent manufactured -- I mean, where all the steps are carried out here in the United States, because if there really isn't any doubt, this truly isn't a worthwhile instruction, because it does not get us anyplace. And if what you are telling me is some doubt, then I will put it in.

But I believe it does not matter about the

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quantity. If there are some NIR stents that routinely are mounted and everything happens in the United States, and this isn't a helpful instruction to the jury in terms of infringement.

MR. ZACHARY: Your Honor, I hope I'm being helpful here. I worked on the Fischell case mostly, not the Palmaz, so forgive me if I misspeak.

As I understand Claim 44, Claim 44 has five elements in it that are supposed to be performed in the United States.

The second step that Mr. Diskant is focusing on is mounting the stent on a catheter. The first step you take before that is utilizing a stent of a certain sort.

And I think -- I stand to be corrected. I will have to confer with Mr. Badenoch. But I think that the first step, our contention would be that that does take place in all cases outside the United States.

I don't want to suggest that without conferring with him, but I believe that to be the case.

MR. DISKANT: I don't think that's -- Medinol manufactures the stent in Israel. It then sells it to Boston. Boston receives it and the first step just requires utilizing it in the U.S.

Boston unequivocally utilizes it in the U.S.

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Patent law provides that any person or business entity which makes, uses or sells without the patent owner's permission, any product apparatus or method, legally protected by at least one valid claim of the patent within the United States before the patent expires infringes the patent.

Cordis is asserting that Boston Scientific directly infringed all of the asserted claims except Claim 44 of the '762 patent.

There are two ways in which a patent claim may be directly infringed. First, a claim may be literally infringed. Second, a claim may be infringed under what is called the doctrine of equivalents. With respect to Claim 44, Cordis does not claim that Boston Scientific itself directly infringes the claim but, rather, alleges that Boston Scientific is liable for contributory infringement.

Boston Scientific denies all of Cordis' infringement allegations.

The preambles to all the asserted claims use the transitional phrase comprising. Comprising is interpreted the same as including or containing. In patent claims, comprising means that the claims are open-ended. As such, the claim is not limited to only what is in the claim based on its explanation. If you find

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that the NIR stent includes each element in an asserted claim, the fact that it may also include an additional element is irrelevant. The presence of additional elements in the NIR stent does not mean that the NIR stent does not infringe an asserted claim.

For the NIR stent to literally infringe any of the asserted patent claims, the subject matter of the patent claim must be found in the NIR stent. In other words, any of the asserted patent claims is literally infringed if the NIR stent includes each and every element in the asserted patent claim. If the NIR stent omits any single element decided in a given patent, Boston Scientific does not literally infringe that claim. You must determine literal infringement with respect to each asserted claim individually. Please remember the question is whether the NIR stent infringes any asserted claims of the patents and not whether the NIR stent is similar to a product made by Cordis. Accordingly, you must be certain to compare the NIR stent with the claim it is alleged to infringe and not with any product made by Cordis.

If you have found that any of the asserted claims is literally infringed, you may nonetheless consider whether the NIR stent is so far changed in principle from the literal words of the claim that a doctrine called the reverse doctrine of equivalents is

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applicable.

Application of the reverse doctrine of equivalents is the exception, not the rule, and is limited to those situations where a defendant's product is so far changed in principle that, although it performs the same or a similar function to produce substantially the same result as that defined by a patent claim, it does so in a substantially different way.

If you find noninfringement under the reverse doctrine of equivalents then you should not consider infringement under the doctrine of equivalents.

If you do not find literal infringement, you may consider infringement under the doctrine of equivalents. Under the doctrine of equivalents, you may find that the NIR stent infringes an asserted patent claim if, for each element of the claim that is not literally present, the NIR stent contains an equivalent of that element. This instruction applies only to the claims of the '762 and '332 patents.

Cordis is not contending that the NIR stent infringes the '312 or '370 patents under the doctrine of equivalents. Application of the doctrine of equivalents is the exception, however, not the rule. Patent claims must be clear enough so that the public has fair notice of what was patented.

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Notice permits other parties to avoid actions which infringe the patent and to design around the patent. On the other hand, the patent owner should not be deprived of the benefits of his patent by competitors who appropriate an invention while avoiding the literal language of the patent claims. The test to determine equivalents under the doctrine of equivalents is whether the differences between the claim element, which you have found not to be literally present, and the element present in the NIR stent are insubstantial. If you find that the claim element and the element of the NIR stent have only insubstantial differences, then you will have determined that the element in the NIR stent is equivalent to the claimed element.

On the other hand, if you find that the claim element and the element in the NIR stent have substantial differences, then you will have determined that the element in the NIR stent is not equal, then, to the claimed element.

In determining whether the differences are substantial or insubstantial, you may also consider whether or not the claimed element and the element in the NIR stent perform substantially the same function in substantially the same way to produce substantially the same result. Keep in mind that the doctrine of equivalents

Exhibit LL

US004739762B1

REEXAMINATION CERTIFICATE (3650th)

United States Patent [19]

Palmaz

[11] B1 4,739,762

[45] Certificate Issued Oct. 27, 1998

[54] **EXPANDABLE INTRALUMINAL GRAFT, AND METHOD AND APPARATUS FOR IMPLANTING AN EXPANDABLE INTRALUMINAL GRAFT**

[75] Inventor: **Julio C. Palmaz**, San Antonio, Tex.

[73] Assignee: **Expandable Grafts Partnership**, San Antonio, Tex.

Reexamination Request:
No. 90/004,785, Oct. 6, 1997

Reexamination Certificate for:

Patent No.:	4,739,762
Issued:	Apr. 26, 1988
Appl. No.:	923,798
Filed:	Nov. 3, 1986

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 796,009, Nov. 7, 1985, Pat. No. 4,733,665.

[51] Int. Cl.[6] A61M 29/00

[52] U.S. Cl. 606/108; 604/104; 604/96; 623/1

[58] Field of Search 606/155, 156, 606/108, 198, 191, 195; 623/1, 12

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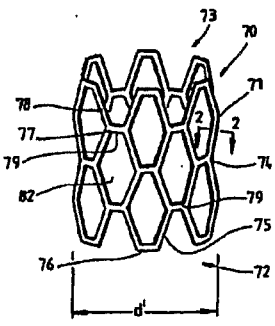
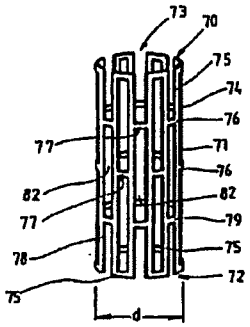
(List continued on next page.)

Primary Examiner—Michael H. Thaler

[57] **ABSTRACT**

An expandable and deformable intraluminal vascular graft is expanded within a blood vessel by an angioplasty balloon associated with a catheter to dilate and expand the lumen of a blood vessel. The graft may be a thin-walled tubular member having a plurality of slots disposed substantially parallel to the longitudinal axis of the tubular member.





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Amended Particulars Of Objections (European Parent No. 0 221 570 (UK) (27 Oct. 1997).
Plea of Invalidity Of EP Patent 0 221 570 B1 (Italy) (21 Mar. 1997).
Writ Of Summons In Nullity By Boston Scientific Of European patent Nos. 0 221 570 And 0 335 341 (France) (17 Mar. 1997).
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Brief Of Response Submitted By Dr. Palmaz (France) (23 Oct. 1997).
English Translation Of Certain Portions Of Nullity Action By Biotronik Against European Patent No. 0 221 570 (Appendix II, Exhibit Q).
Plea Of Invalidity Of European Patent No. 0 221 570 By Boston Scientific (Netherlands) (13 Mar. 1997).
Memorandum Of Oral Pleading Filed On Behalf Of Boston Scientific (Netherlands) (12 Sep. 1997).
Plea Notes Filed On Behalf Of Palmaz (Netherlands) 12 Sep. 1997).
Provisional Judgment Of District Court In The Hague (Netherlands) (29 Oct. 1997).
Arterial Vascular Engineering, Inc.'s "Complaint For Declaratory Relief Of Patent Invalidity, Unenforceability, Noninfringement, And For Antitrust Violations", Case No. 97–700, Dec. 26, 1997.
Cordis Corporation's "Complaint For Patent Infringement And Demand For Jury Trial", Case No. 97–550, Oct. 3, 1997.
Cordis Corporation's "First Amended Complaint And Demand For Jury Trial", Case No. 97–550–SLR, Oct. 21, 1997.
Boston Scientific Corporation and SCIMED Life System, Inc.'s "Answer", Case No. 97–550–SLR, Nov. 12, 1997.
Cordis Corporation's "Cordis's Motion For A Preliminary Injunction Against Arterial Vascular Engineering, Inc.", Case No. 97–550–SLR, Dec. 29, 1997.
Cordis Corporation's "Cordis Corporation's Motion For a Preliminary Injunction", Case No. 97–550, Oct. 8, 1997.

REEXAMINATION CERTIFICATE ISSUED UNDER 35 U.S.C. 307

THE PATENT IS HEREBY AMENDED AS INDICATED BELOW.

Matter enclosed in heavy brackets [ ] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

ONLY THOSE PARAGRAPHS OF THE SPECIFICATION AFFECTED BY AMENDMENT ARE PRINTED HEREIN.

Column 7, after line 20:

With reference to FIGS. 1A and 1B, it is seen that certain of the slots 82 formed in tubular member 71 are open ended slots. The circumferentially adjacent slots 82, whether open ended or closed, define ring portions that are defined by a plurality of peak portions and valley portions. In the preferred embodiment, the ring portions at the first and second ends 72, 73 are not in phase with each other. Also in the preferred embodiment, open ended slots are defined by a pair of spaced apart elongate members 75 that are connected together by a connecting member 77 that extends between one end of each of the elongate members 75.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

The patentability of claims 23 and 34 is confirmed.

Claims 13 and 24 are cancelled.

Claims 1, 14, 16–19, 25, 29, 31–33, 35, 37, 40 and 41 are determined to be patentable as amended.

Claims 2–12, 15, 20–22, 26–28, 30, 36, 38, 39, 42 and 43, dependent on an amended claim, are determined to be patentable.

New claims 44–59 are added and determined to be patentable.

1. A method for implanting a prosthesis within a body passageway comprising the steps of:

utilizing a thin-walled, tubular member as the prosthesis, the tubular member having a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of the tubular member;

disposing the prosthesis upon a catheter;

inserting the prosthesis and catheter within the body passageway by catheterization of said body passageway; and

expanding and deforming the prosthesis at [a desired] *the* location *of an existing natural obstruction* within the body passageway by expanding a portion of the catheter associated with the prosthesis to force the prosthesis radially outwardly into contact with the body passageway, the prosthesis being deformed beyond its elastic limit.

14. The expandable intraluminal vascular graft of claim [13] *23*, wherein the slots are uniformly and circumferentially spaced from adjacent slots and the slots are uniformly spaced from adjacent slots along the longitudinal axis of the tubular member, whereby at least one elongate member is formed between adjacent slots.

16. The expandable intraluminal vascular graft of claim [13] *23*, wherein the tubular member does not exert any outward, radial force while the tubular member has the first or second, expanded diameter.

17. The expandable intraluminal vascular graft of claim [13] *23*, wherein the slots have a substantially rectangular configuration when the tubular member has the first diameter; and the slots have a substantially hexagonal configuration when the tubular member has the second, expanded diameter.

18. The expandable intraluminal vascular graft of claim [13] *23*, wherein the slots have a configuration which is substantially a parallelogram after the tubular member has been expanded and deformed into the second expanded diameter.

19. The expandable intraluminal vascular graft of claim [13] *23*, wherein the tubular member has a biologically inert coating on the wall surface.

25. The expandable prosthesis for a body passageway of claim [24] *34*, wherein the tubular member has a biological inert coating on the wall surface.

29. The expandable prosthesis of claim [24] *34*, wherein the slots are uniformly and circumferentially spaced from adjacent slots and the slots are uniformly spaced from adjcent slots along the longitudinal axis of the tubular member, whereby at least one elongate member is formed between adjacent slots.

31. The expandable prosthesis of claim [24] *34*, wherein the tubular member does not exert any outward, radial force while the tubular member has the first or second expanded diameter.

32. The expandable prosthesis of claim [24] *34*, wherein the slots have a substantially rectangular configuration when the tubular member has the first diameter, and the slots have a substantially hexagonal configuration when the tubular member has the second, expanded diameter.

33. The expandable prosthesis of claim [24] *34*, wherein the slots have a configuration which is substantially a parallelogram after the tubular member has been expanded and deformed intop the second expanded diameter.

35. An apparatus for intraluminally reinforcing a body passageway, comprising:

an expandable and deformable, thin-walled tubular prosthesis having first and second ends, and a wall surface disposed between the first and second ends, the wall surface having a *substantially uniform thickness and a* plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of the prosthesis, *the prosthesis having a first diameter which permits intraluminal delivery of the prosthesis into a body passageway having a lumen and wherein the outside of the wall surface of the prosthesis is a smooth surface when the prosthesis has the first diameter*; and

a catheter having an expandable, inflatable portion associated therewith and including means for mounting and retaining the expandable, thin-walled tubular prosthesis on the expandable, inflatable portion,

whereby upon inflation of the expandable, inflatable portion of the catheter, the prosthesis is expanded and deformed radially outwardly into contact with the body passageway.

37. An apparatus for expanding the lumen of a body passageway comprising:

an expandable and deformable thin-walled intraluminal vascular graft having first and second ends, and a wall

surface disposed between the first and second ends, the wall surface having a *substantially uniform thickness and a* plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of the graft, *the vascular graft having a first diameter which permits intraluminal delivery of the graft into a body passageway having a lumen and wherein the outside of the wall surface of the graft is a smooth surface when the graft has the first diameter*; and

a catheter having an expandable, inflatable portion associated therewith and including means for mounting and retaining the expandable, deformable intraluminal vascular graft on the expandable, inflatable portion,

whereby upon inflation of the expandable, inflatable portion of the catheter, the intraluminal vascular graft is expanded and deformed radially outwardly into contact with the body passageway.

40. The expandable intraluminal vascular graft of claim [13] *23*, wherein tantalum is utilized for the tubular member.

41. The expandable prosthesis of claim [24] *34*, wherein tantalum is utilized for the tubular member.

44. A method for implanting a balloon expandable stent prosthesis within a passageway of a coronary artery having an area of stenosis, comprising the steps of:

utilizing a thin-walled, tubular member as the stent prosthesis, the tubular member having a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of the tubular member;

disposing the stent prosthesis upon a catheter having an inflatable balloon portion;

inserting the stent prosthesis and catheter within the passageway by percutaneous catheterization;

delivering the catheter and stent prosthesis to the area of stenosis without surgically exposing the area of the passageway; and

expanding and deforming the stent prosthesis at the area of stenosis within the coronary artery passageway by expanding the inflatable balloon portion of the catheter associated with the stent prosthesis to force the stent prosthesis radially outwardly into contact with the area of stenosis in the passageway, the stent prosthesis being controllably deformed beyond its elastic limit.

45. The method of claim 44 wherein at least certain of the slots are defined by a pair of spaced apart elongate members that are connected together at one end of each of the elongate members so as to define an open ended slot.

46. The method of claim 44, wherein said tubular member includes at least one ring portion defined by circumferentially adjacent slots so as to define a plurality of peak portions and valley portions.

47. The method of claim 46, wherein said tubular member has a first end and a second end and includes one of said ring portions at said first and second ends thereof.

48. The method of claim 46, wherein the tubular member is formed from a plastically deformable material.

49. The method of claim 46, wherein the stent prosthesis after expansion has mechanical strength sufficient to provide radial support of the body passageway and prevent migration of the stent prosthesis within the body passageway.

50. The method of claim 46, wherein the tubular member has an outer wall surface and the slots formed in the outer wall surface upon expansion of the tubular member define open areas of approximately eighty percent (80%) of the area of the wall surface.

51. In combination, a balloon expandable stent prosthesis for implantation in the passageway of a coronary artery having an area of stenosis and a catheter, comprising:

an expandable stent prosthesis being a thin-walled tubular member having first and second ends and a wall having an outer wall surface disposed between the first and second ends, the wall having a substantially uniform thickness and a plurality of slots formed therein, the slots being disposed substantially parallel to the longitudinal axis of the tubular member,

a catheter having an expandable, inflatable balloon portion;

the tubular member being disposed on the balloon portion of the catheter;

the tubular member having a first diameter which permits intraluminal delivery of the tubular member and the catheter into a lumen of a coronary artery having an area of stenosis and wherein the outside of the wall surface of the tubular member is a smooth surface when the tubular member has the first diameter; and

the tubular member having a second, expanded and deformed diameter upon the application from the interior of the tubular member of radially, outwardly extending force, by inflating the balloon portion of the catheter, which second diameter is variable and controlled by the amount of force applied to the tubular member, whereby the tubular member may be expanded and deformed to expand the coronary artery in the area of stenosis.

52. The combination of claim 51, wherein at least certain of the slots are defined by a pair of spaced apart elongate members that are connected together at one end of each of the elongate members so as to define an open ended slot.

53. The combination of claim 52, wherein a connecting member extends between and connects said one end of each of the elongate strut members.

54. The combination of claim 51, wherein said tubular member includes at least one ring portion defined by circumferentially adjacent slots so as to define a plurality of peak portions and valley portions.

55. The combination of claim 54, wherein said tubular member includes one of said ring portions at its first and second ends.

56. The balloon expandable stent prosthesis of claim 55, wherein the ring portions at the first and second ends are not in phase with each other.

57. The combination of claim 51, wherein the tubular member is formed of a plastically deformable material.

58. The combination of claim 51, wherein the tubular member in its second, expanded diameter has mechanical strength sufficient to provide radial support of the coronary artery and prevent migration of the tubular member from the area of stenosis.

59. The combination of claim 51, wherein the slots formed in the wall surface of the tubular member in its second, expanded diameter define open areas of approximately eighty percent (80%) of the area of the wall surface.

* * * * *

Exhibit MM

- VOLUME F -
IN THE UNITED STATES DISTRICT COURT
IN AND FOR THE DISTRICT OF DELAWARE

CORDIS CORPORATION, : CIVIL ACTION
Plaintiff :
vs. :
MEDTRONIC AVE, INC., et al. : NO. 97-550 (SLR)

BOSTON SCIENTIFIC CORPORATION, et al., : CIVIL ACTION
Plaintiffs :
vs. :
ETHICON, INC., et al., :
Defendants : NO. 98-19 (SLR)

CORDIS CORPORATION, : CIVIL ACTION
Plaintiff :
vs. :
BOSTON SCIENTIFIC CORPORATION, et al., :
Defendants : NO. 98-197 (SLR)

Wilmington, Delaware
Friday, December 1, 2000
8:05 o'clock, a.m.

BEFORE: HONORABLE SUE L. ROBINSON, Chief Judge, and a jury

Official Court Reporters

APPEARANCES:

ASHBY & GEDDES
BY: STEPHEN J. BALICK, ESQ.

-and-

PATTERSON, BELKNAP, WEBB & TYLER, LLP
BY: GREGORY L. DISKANT, ESQ.
EUGENE M. GELERNTER, ESQ.
WILLIAM F. CAVANAUGH, ESQ. and
MICHAEL J. TIMMONS, ESQ.
(New York, New York)

-and-

JOHNSON & JOHNSON
BY: ERIC I. HARRIS, ESQ.

Counsel for Plaintiffs

YOUNG, CONAWAY, STARGATT & TAYLOR
BY: JOSY W. INGERSOLL, ESQ.

-and-

KENYON & KENYON
BY: GEORGE E. BADENOCH, ESQ.
PAUL A. BONDOR, ESQ.
ALBERT J. BRENEISEN, ESQ.
MICHAEL ZACHARY, ESQ. and
ARTHUR GRAY, ESQ.
(Washington, D.C.)

Counsel for Defendants

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PROCEEDINGS

(Proceedings commenced at 8:05 a.m., and the following occurred without the presence of the jury.)

THE COURT: Because we don't have a whole lot of time, I don't know that there's much disagreement about the law. I think it would be more helpful to me to get a feel for what the evidence is so that I can determine whether the evidence crosses the line in terms of the legal underpinnings.

MR. DISKANT: Respectfully, your Honor, I think there's great disagreement about the law, and I respectfully request a few minutes to address that.

THE COURT: That's fine. I mean, I have the law in front of me, so it will be interesting to see where the disagreement lies.

MR. DISKANT: That's fine your Honor.

Their issue -- they claim that you need more than knowledge of the chart, the patent and the charge of infringement. They claim that we must show, or they are allowed to show that they did not intend to infringe a valid and enforceable patent.

The Arrow case is the first case on the

subject. I think it unequivocally rejects their position. The Arrow case, on Page 1534, the Supreme Court said, With respect to a charge of contributory infringement, does require that the alleged contributory infringer knew of a combination for which his component that was especially designed was both patenting and infringing. They say the answer is yes.

Here's the evidence they then cite. Arrow clearly had such knowledge for by letter dated January 2, 1954, AB informed Arrow that it held a patent, that it granted a license under the patent to GM, to no one else, and that it was obvious from the foregoing that Arrow would be infringing.

Thus, the Court's interpretation of the knowledge requirement of Fords Arrow, no defense. No defense.

The Supreme Court in Arrow said that because defendant knew about the patent and knew about the charge of infringement, it had no defense under the knowledge requirement. It did not matter whether Arrow could come in and say, Well, we have a noninfringement position. It did not matter whether Arrow could come in and say, we have an invalidity defense. It did not matter that Arrow could come in and say, we think the patent is unenforceable.

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Was the NIR also presented in one of the papers at that meeting?
A. Yes. Yes, it was.
Q. Now, are the live cases longer than the papers?
A. Well, the cases -- the papers might be 15 minutes and they might have a 15 or 20 minute Q&A session after it, and then maybe if people are really interested, they'll linger in small groups and talk some more.
But the prescribed time is very short, because people have to get on to the next thing.
The live case demonstrations are a little different. Now you're talking about an entire procedure, so the patient is prepared and on the table and then the -- the angiograms or the diagnosis is reviewed with a live audience. There's a panel discussion with the audience around. Sort of differential diagnosis. What's wrong with this patient. What do we think? What's the history? What are the different ways in which this patient might be treated?
In fact, although the physician doing the procedure doesn't really respond to it, the panel moderator at the Thorax Center, who is actually presenting this beamed satellite, that person will actually ask the audience if they agree about the diagnosis. Raise of hands, or what do they think the

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treatment ought to be? How many think this? How many think that?
And it's quite an extraordinary event. And after all of that and everyone has had sort of a chance to decide, then the physician will actually do what he does and it may or may not coincide with what the group thinks.
It's a didactic. It's a teaching exercise. The intent of it is to help everyone go through the same exercise together in terms of what's the problem, what are the alternate ways to fix it? How do people mostly think about it? And then we let the physician go and do what he does and then everyone learns from that result.
So it's a longer -- it's a ten, twenty, thirty, sometimes hour-long presentation.
Q. How is the stent or -- let me ask: Who selects the stent that's actually used in these --
A. Well, that's selected by the physician doing the procedure. And a physician is not going to select a stent that is other than the one he thinks is exactly right for the patient. This is a coronary artery. This is a very sick patient. This is a very important procedure. So that choice will be his alone, or hers.
Q. And so if you look at the program, which I believe starts on Page 6 in the program there, it goes through.

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MR. BADENOCH: Could we enlarge in the middle, please, the first live cases?
THE WITNESS: That's an example of where the live case was scheduled.
BY MR. BADENOCH:
Q. That's why the live cases don't stay what stent is used in the program in advance?
A. Well, they also don't say what center. It could be Washington, it could be Japan, it could be Rome, Milan. It could be anywhere in the world.
And until, in fact, they know who that is, it's impossible to say who it's going to be. We certainly couldn't put it in this document, which goes out months before.
So it's usually decided that day, that morning of that live case.
Q. So what do you remember about the stent selected for the live cases at this program in December of 1995?
A. Well, as I said earlier, we had really just done our own research on the NIR, and so we were very enthusiastic about it. And I went to the Thorax Center because of all of the stents, all of the stents that were available or to be available would be showcased there, in papers and scientific sessions, et cetera. And all the companies that are there and representing them have

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booths and scientific papers. And you can go and talk and meet. And I, of course, did that.
I was astonished to find that a very overwhelming number of the live cases were done with NIR, as I said. And, of course, we had nothing to do with that, but it turned out to be a rather exhilliarating session for all of us, because it had been overwhelmingly the device of choice in that particular year. And it was just a NIR buzz. It was quite something. And we had nothing to do with it but, of course, we were quite enthusiastic about it.
Q. Do you think it is possible that anyone could have attended that meeting and come away not knowing about the NIR?
A. Impossible.
Q. And in the program, do you remember whether Tim Fischell was at that meeting?
A. Tim was there. Dr. Fischell was there. In fact, he made a presentation at the --
Q. Does Boston Scientific sell the NIR stent today?
A. Yes, we do.
Q. And in marketing the NIR stent today, could you explain briefly, what is the role of Medinol and what is the role of the Boston Scientific?
A. Well, Medinol is our business partner. As I said

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earlier, they really are involved in the design, the R&D, the manufacturing and supply of this device to Boston Scientific.

Boston Scientific's primary role is the development of the catheter delivery systems. That's what we do. Mounting of the stent on the delivery system, and then supplying, selling, marketing that delivery system worldwide.

We have a collaborative, though, relationship beyond that, that talks about regulatory, talks about clinical and it talks about really the whole strategy of the new product development activity. We do those kinds of things together.

Q. Where are the stents, the NIR stents today actually mounted on the balloons?

A. Medinol supplies all of the stents that they manufacture to our facilities in Ireland. And then they are mounted on catheters in Ireland. The great majority of them are. And there's a small amount of that activity going on in the United States as well.

Q. In addition to its use in coronaries, has the NIR stent been approved by the FDA for any other applications?

A. Yes. It is approved for peripheral use as well.

Q. Is the NIR stent an important product of Boston Scientific?

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A. It is a very important product for our company, and it is a -- a stent technology that, through all the iterations of competitive activity and et cetera, we've learned something we didn't know, and that was that when we launched it, it was already a third- or fourth-generation device, and the ones that are coming onto the market today are just now beginning to demonstrate the attributes that the Richters and Medinol developed into the NIR stent several years ago when we launched it. It's a very important device to us and it's a very valuable device for physicians to have as an alternative when they choose to treat patients with this disease.

Q. Does Boston Scientific own patents?

A. Yes, we do own patents.

Q. Approximately how many patents do you have?

A. Well, we have approximately, I think in the range of 2000 patents. We have probably a thousand patents pending at any one time. And, as a matter of fact, I'm not sure this is a big deal, but last year Fortune Magazine reviewed technology in America and they looked at all the companies that were in the business in patents and we were noted as one of the top 50 prolific patenters in the country in the technology sector.

Q. Are patents important to Boston Scientific?

A. Patents are very important to Boston Scientific,

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and they're important in multiple ways. Maybe not obvious, but historically we've always used patents not really to keep others out. We have historically viewed patents as creating the opportunity to preserve our ability to compete. We defend what we do with patents and they are extremely important to our ongoing business.

Q. Does Boston Scientific have any policies designed to guard against infringing patent rights of others?

A. We have policies. I'm sure all companies do. And we do. And we are trying to be very zealous and very careful and mindful of the fact that when we introduce a new device, that we research it very carefully to assure ourselves that not only is this device safe and effective, but that it does not infringe any intellectual property that we're aware of at that time.

Q. At the time that Boston Scientific launched the NIR stent, were you confident you would not be infringing the rights of anyone else?

A. Yes, we were.

MR. BADENOCH: Thank you, Mr. Nicholas. Your witness.

THE WITNESS: Thank you.

CROSS-EXAMINATION

BY MR. CAVANAUGH:

Q. Good afternoon, Mr. Nicholas.

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A. Hello.

Q. We have not met before. My name is Bill Cavanaugh and I represent Johnson & Johnson.

A. Thank you, Bill.

Q. Mr. Nicholas, am I correct that, back in 1986, you had occasion to meet Dr. Palmaz?

A. I have known Dr. Palmaz longer than that.

Q. Okay. But in 1986, he came up to see you and your group up in Massachusetts, did he not?

A. He came up to Boston many, many times about this matter. Yes.

Q. Okay. And there was a time he came up in roughly the mid-1980's, where he showed you his idea for a stent; correct?

A. Put that in context. Dr. Palmaz met with a number of our people at the RSNA in '84 and had many discussions. And it was in, I think, late '85 that Joseph Lowe made the decision that it probably made sense for Dr. Palmaz and some others to come visit. And they did. They came and visited me in my office.

Q. Okay. And he showed you his stent idea?

A. He talked about it. He showed it to us. He had different sort of prototypes of things, cardboard tubes and other things and some of the stuff I think we've actually seen here today.

Exhibit
NN

Redacted in its Entirety

Exhibit OO

Redacted in its Entirety